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BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE  
Chairman  
BOB STUMP  
Commissioner  
BOB BURNS  
Commissioner  
TOM FORESE  
Commissioner  
ANDY TOBIN  
Commissioner

IN THE MATTER OF THE APPLICATION  
OF SOUTHWEST GAS CORPORATION  
FOR DETERMINATION OF PRUDENCE  
AND PRE-APPROVAL OF RATEMAKING  
TREATMENT RELATING TO  
CONSTRUCTION OF LIQUIFIED  
NATURAL GAS STORAGE FACILITY IN  
SOUTHERN ARIZONA.

DOCKET NO. G-01551A-14-0024

DECISION NO. 75860

ORDER

Arizona Corporation Commission

DOCKETED

JAN - 3 2016

DOCKETED BY

Open Meeting  
December 19 and 20, 2016  
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. Southwest Gas Corporation ("Southwest" or "Company") is engaged in providing natural gas service within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission ("ACC" or "Commission").

2. On October 24, 2016, Southwest filed an application requesting that Decision Number 74875 (December 23, 2014) be reopened pursuant to Section 40-252 ("40-252") of the Arizona Revised Statutes. Southwest is requesting that Decision Number 74875 be reopened to change the requirement that "any authorizations to defer costs shall be limited to \$50 million" and allow \$80 million in total costs for the proposed liquid natural gas ("LNG") storage facility near Tucson.

3. Previously, on January 27, 2014, Southwest filed an application for pre-approval of the construction of an LNG storage near Tucson, with a projected cost of approximately \$46 million and flexibility to spend up to \$55 million. Southwest's application was pursuant to the Commission's

1 December 18, 2003 Policy Statement Regarding New Natural Gas Pipeline and Storage Costs, which  
2 allowed entities to seek pre-approval and/or alternative cost treatment for new natural gas  
3 infrastructure under certain circumstances. Southwest estimated it would take 24 to 30 months to  
4 construct the facility once Commission approval was granted.

5 4. Southwest further estimated that a typical residential bill impact would be an increase  
6 of approximately \$0.62 per month or 1.54 percent. Staff recommended approval of the application  
7 with a major factor being that there was no salt cavern storage option under consideration at the time.  
8 In Decision No. 74875 (December 24, 2014), the ACC granted pre-approval of expenditures up to  
9 \$50 million for the proposed LNG storage facility, subject to a number of conditions.

10 5. The project has proceeded more slowly than projected and Southwest's recent  
11 application indicates that the Company has successfully acquired land for the project and recently  
12 completed a request-for-proposal ("RFP") process for construction of the facility. The results of the  
13 RFP process indicate that the total cost to construct the facility is significantly higher than was  
14 estimated during the 2014 pre-approval process, with the total cost rising from \$46 million to  
15 approximately \$80 million. Therefore, Southwest is asking the Commission to amend Decision 74875  
16 to reflect a cost cap of \$80 million, rather than the current cap of \$50 million.

17 **Staff Analysis and Recommendations**

18 6. Staff believes that Southwest's 40-252 request calls upon the Commission to assess  
19 both the cost increase proposed by Southwest as well as the current need for and prospects for natural  
20 gas storage development in Arizona.

21 *Need for Natural Gas Storage*

22 7. Staff continues to be supportive of the development of natural gas storage in Arizona.  
23 The need for natural gas storage has steadily grown over the past 15-20 years. Factors contributing to  
24 this growing need for natural gas storage include:

- 25 A. A dramatic increase in Arizona's consumption of natural gas for the generation  
26 of electricity.
- 27 B. The growing need for natural gas generation to backstop intermittent  
28 renewable energy resources.

1 C. The lack of progress at the Federal Energy Regulatory Commission and the  
2 North American Energy Standards Board to provide Arizona natural gas  
3 consumers, and particularly electric generators, greater flexibility in scheduling  
4 their natural gas supplies.

5 D. The potential implementation of the Clean Power Plan and resulting likely  
6 greater reliance on natural gas generation.

7 E. Service outages have demonstrated the need for natural gas storage, particularly  
8 Southwest Gas' 2011 southern Arizona outage, where Southwest lost service to  
9 almost 20,000 customers.

10 *Natural Gas Storage Options*

11 8. Staff believes that the question is not so much whether Arizona needs natural gas  
12 storage but, rather, primarily what approach or approaches are preferable in the pursuit of natural gas  
13 storage. The two primary options at this time are Southwest's LNG facility at issue in this proceeding  
14 and a proposed Kinder Morgan salt cavern natural gas storage facility. Southwest's LNG facility is  
15 much smaller, more costly per volume of storage, but more certain of being built. The Kinder  
16 Morgan salt cavern facility would be much larger, less costly per volume of storage, and is less certain  
17 of being built.

18 9. Salt cavern storage development in Arizona is limited geologically, with salt formations  
19 considered over the years including the Copper Eagle project near Luke Air Force Base, the Red Lake  
20 area north of Kingman, and the Picacho area. The primary location where salt cavern development  
21 has been under consideration in recent years is in the Picacho region between Phoenix and Tucson.  
22 Both Kinder Morgan/El Paso Natural Gas ("Kinder Morgan") and Multi-Fuels LP have pursued  
23 natural gas storage development in the Picacho area. There was a good deal of discussion regarding  
24 natural gas storage development in Arizona following Southwest's winter 2011 service outages, but by  
25 the time Southwest filed for pre-approval of the LNG storage facility in 2014, there was little or no  
26 activity regarding development of a salt cavern storage facility.

27 10. However, Kinder Morgan has begun again more actively pursue natural gas storage in  
28 the Picacho region. At the Commission's October 18, 2016 Winter Preparedness Meeting, Kinder

1 Morgan provided a presentation on its recent efforts regarding its Arizona Gas Storage project in the  
2 Picacho area. Kinder Morgan's proposal would involve four one billion cubic foot capacity salt  
3 caverns with an open season planned for December 2016, initiation of the permitting process in  
4 January 2017, and an in service date for the first cavern of November 2020. Kinder Morgan has  
5 indicated that, in conjunction with developing the salt cavern facility, it would offer full No Notice  
6 service to customers, which would enable an entity that holds both storage capacity and interstate  
7 pipeline capacity to freely access its natural gas in storage up to the limits of the entity's capacity.

8 11. Salt cavern storage development efforts in Arizona in the last 15-20 years have been  
9 hampered by a number of factors including:

- 10 A. Difficulty in justifying project development on an economic basis.
- 11 B. Locational issues such as distance from Arizona markets in the case of Red  
12 Lake and proximity to military facilities and west valley development in the  
13 case of Copper Eagle.
- 14 C. Legislative opposition in the case of Copper Eagle.
- 15 D. Brine disposal, whether in an underground aquifer or above ground.
- 16 E. Uncertainty regarding the ability to efficiently mesh natural gas storage with  
17 interstate pipeline capacity contracts.

18 12. Staff believes that the case for pursuing natural gas salt cavern storage is now more  
19 compelling than in the past, recognizing that there is still some uncertainty, particularly due to the  
20 issue of brine disposal. The lack of natural gas storage in Arizona makes Arizona more vulnerable to  
21 potential utility service outages, whether natural gas or electric.

22 *Southwest's Role in Natural Gas Storage Development in Arizona*

23 13. Southwest is by far the largest natural gas local distribution company ("LDC") in  
24 Arizona with over one million customers. Thus, Southwest is one of a number of entities in Arizona  
25 that can help drive development of natural gas storage in Arizona. However, consumption of natural  
26 gas in Arizona for electric generation now far outstrips consumption of natural gas through Southwest  
27 and other Arizona LDCs. Consequently, the primary driver in the development of natural gas storage  
28 in Arizona is support from electric generators, including Arizona Public Service Company, Salt River

1 Project, and Tucson Electric Power Company. However, Southwest can still play a supporting role  
2 and help develop natural gas storage in Arizona, particularly in the case of salt cavern storage, where  
3 there is the need for a critical mass of support within Arizona for such a project to move forward.

4 14. In discussions over the years, Staff has heard a number of times that for a salt cavern  
5 natural gas storage facility to be developed in Arizona support from Southwest as well as the three  
6 largest Arizona electric utilities is needed. Southwest has indicated to Staff that it will be supportive of  
7 salt cavern natural gas storage development even if it already has natural gas storage capacity from the  
8 LNG facility near Tucson. Staff has no reason to doubt the veracity of this representation. However,  
9 it stands to reason that if Southwest has an LNG storage facility near Tucson, Southwest's need for  
10 capacity in a potential salt cavern storage facility would be significantly lessened.

11 *Comparability of LNG storage and salt cavern storage*

12 15. An important question in considering Southwest's LNG facility is how comparable are  
13 the benefits of the proposed LNG facility near Tucson to those of the potential salt cavern facility in  
14 the Picacho area for Southwest. Regarding the ability to access natural gas storage to meet  
15 Southwest's needs in a time of peak need or to avoid service outages, Staff believes the LNG facility is  
16 largely interchangeable with salt cavern storage. Both are located in the same region. While the LNG  
17 facility would be directly connected to a portion of Southwest's Tucson service area and would be  
18 controlled by Southwest, Staff believes that nearby salt cavern storage with no notice service would  
19 provide Southwest with similar access to natural gas in a very short timeframe. To the extent that salt  
20 cavern natural gas storage capacity is less expensive per unit than LNG storage capacity and might  
21 provide more direct deliverability to Southwest's delivery points outside of the Tucson area,  
22 Southwest would actually have greater overall deliverability and resulting benefits from a salt cavern  
23 for a given expenditure level.

24 16. Staff's understanding is that, on its current timeframe, Southwest's proposed Tucson  
25 LNG facility would likely go into operation in 2019. This is slightly sooner and probably more certain  
26 than Kinder Morgan's projected timeline of the first salt cavern going into service in 2020.

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*Cost of LNG Facility*

17. Southwest's 40-252 application reflects the need to increase the Commission-approved cost cap for the LNG facility from \$50 million to \$80 million, an increase of 60 percent. Southwest application also indicates that despite this increase, Southwest estimates that the average monthly residential bill impact would only increase from \$0.62 to \$0.63. Staff held a number of discussions with Southwest regarding why the total cost increased so much, but the bill impact barely changed. It appears there are multiple reasons.

18. The primary reason is that the volume of sales over which the cost would be recovered grew from approximately 526 million therms when Southwest estimated the bill impact in 2014 to approximately 663 million therms when Southwest calculated the bill impact under the \$80 million cost. This was due to the Company not including transportation customers who pay the full tariffed rate in its 2014 bill impact estimate, a substantial class that accounts for approximately 136 million therms. The net effect of omitting these customers was that Southwest overestimated the 2014 bill impact calculation.

19. Second, Southwest used a different cost of gas in 2014 and 2016. Southwest also used a different tariffed rate in 2014 and 2016. Finally, Southwest's 2016 calculation includes bonus depreciation while the 2014 calculation does not.

20. Below is a table showing residential bill impacts under Southwest's 2014 calculations, Southwest's 2016 calculations, and Staff's revision of the 2014 calculations using the same therm and gas cost assumptions used in 2014. Staff's calculations in the column on the right provide a roughly apples-to-apples 2014 comparison to Southwest's 2016 calculations. Staff has not calculated the impact of bonus depreciation being used in 2016 and not in 2014, but understands that such impact would be relatively small, reducing Southwest's 2016 bill impact calculation by possibly \$0.01 or \$0.02 per month.

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	Southwest 2014 Residential Bill Impact	Southwest 2016 Residential Bill Impact	Staff Apples-to- Apples Revised 2014 Bill Impact
Facility Cost	\$55,000,000 <sup>1</sup>	\$80,000,000	\$55,000,000
Total Therms	525,562,794	663,337,787	663,337,787
Gas Cost	\$1,677,700	\$1,466,004	\$1,466,004
LNG Facility Cost Per Therm	\$0.02178	\$0.02278	\$0.01725
Basic Service Charge	\$10.70	\$10.70	\$10.70
Tariffed Rate per therm	\$1.16291	\$1.19719	\$1.19719
<i>Summer (11 therms)</i>			
Average Bill Absent LNG	\$23.49	\$23.87	\$23.87
Average Bill With LNG	\$23.73 (+\$0.24)	\$24.12 (+\$0.25)	\$24.06 (+\$0.19)
<i>Winter (39 therms)</i>			
Average Bill Absent LNG	\$56.05	\$57.39	\$57.39
Average Bill With LNG	\$56.90 (+\$0.85)	\$58.28 (+\$0.89)	\$58.06 (+\$0.67)
<i>Winter Peak Month (75 therms)</i>			
Average Bill Absent LNG	\$99.55	\$102.20	\$101.78
Average Bill With LNG	\$101.19 (+\$1.64)	\$103.91 (+\$1.71)	\$103.08 (+\$1.30)
<i>Annual (25 therms)</i>			
Average Bill Absent LNG	\$39.77	\$40.63	\$40.63
Average Bill With LNG	\$40.32 (+\$0.55)	\$41.20 (+\$0.57)	\$41.06 (+\$0.43)

21. Staff is concerned about the significant cost increase, and resulting increase to Arizona ratepayers, for a proposed facility that was already more costly than the other natural gas storage option in Arizona. Comparing the last two columns above, the higher 2016 facility cost of \$80 million would cost an average residential customer approximately an additional \$0.19 per month annually, with an increase of approximately \$0.43 in a winter peak month.

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<sup>1</sup> Southwest's 2014 bill impact was based on its requested \$55 million cap, not the estimated project cost of \$46.3 million. The Commission subsequently reduced the allowed cap to \$50 million in Decision No. 74875.

**Conclusions**

22. Since the Commission granted pre-approval for the LNG storage facility in 2014, some circumstances have changed, primarily the cost of the proposed LNG facility has increased from \$46 to \$80 million and there are now active efforts to develop a salt cavern storage facility relatively close to Tucson. These are both very significant developments that greatly change the natural gas storage landscape in Arizona from that which existed in 2014. While Staff continues to be very supportive of natural gas storage development in Arizona, the much higher cost of the LNG facility and the active pursuit of a salt cavern facility in Arizona cause give Staff significant pause in considering whether to support Southwest's 40-252 application in this proceeding.

23. Within a relatively short timeframe, it will become evident whether the Kinder Morgan project is moving forward on the approximate timeframe Kinder Morgan indicated or not. In light of this circumstance, Staff believes that it would be beneficial to place the pre-approval of the LNG facility at the \$80 million cost level on hold for a period of six months to see whether the preferred salt cavern storage facility is likely to happen or not.

24. Staff has recommended that Southwest file a report by June 30, 2017, indicating the status of Kinder Morgan's salt cavern project and other information Southwest believes is pertinent. This report should include a detailed financial comparison of the LNG and salt cavern options, as well as the operational advantages and disadvantages of each option. Staff could then file an updated memorandum and the Commission could consider whether to approve or deny Southwest's 40-252 request in the proceeding. Such an approach would provide the opportunity for ratepayers to benefit from the lower cost salt cavern facility if it actually comes to fruition and if not, to allow Southwest to move forward with the LNG facility with a relatively short delay, given that the Commission's pre-approval of the LNG project occurred approximately two years ago. The Company's management has the discretion to decide whether to move forward with the project or not absent deferral.

**Conclusions**

25. Staff has recommended that the Commission put off taking action now and instead have Southwest file a report in six months that compares the proposed LNG facility to a potential salt cavern project being pursued by Kinder Morgan. Staff indicated they would then produce a revised

1 memorandum (without specifying a timeline) for the Commission to consider. We declined to  
2 support Staff's proposal primarily because there is likely to be as much uncertainty regarding the salt  
3 cavern project in six months as there is now. Kinder Morgan may very well initiate an open season in  
4 the near future that will provide some information. But there is no reason to believe that the  
5 significant environmental issues surrounding the salt cavern project will be resolved with any certainty  
6 within six months.

7       26. We are concerned that if we follow Staff's recommendations we will find ourselves at  
8 best in the same place we are now in seven, eight or nine (or more) months. Or we may be in a  
9 situation where the uncertainty regarding the salt cavern project has not been resolved but the cost of  
10 the LNG facility has risen substantially from where it is now.

11       27. The lack of natural gas storage in Arizona has been a concern for this Commission for  
12 some time. Decision No. 74875 was precipitated by severe customer affecting outages. We do not  
13 want Arizona's utility customers to experience such outages again. Avoiding such outages requires  
14 investments in storage facilities. Given that the Commission has previously endorsed the LNG  
15 project (in Decision NO. 74875) and given that the impacts on individual rate payers are not  
16 substantial relative to what the Commission contemplated at the time Decision No. 74875 was issued,  
17 we support the modifications to Decision No. 74875 proposed by Southwest.

#### 18 CONCLUSIONS OF LAW

19       1. Southwest is an Arizona public service corporation within the meaning of Article XV,  
20 Section 2, of the Arizona Constitution.

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22       2. The Commission has jurisdiction over Southwest and over the subject matter of the  
23 application.

24       3. The Commission, having reviewed the application and Staff's Memorandum dated  
25 December 8, 2016, concludes that it is in the public interest to have Southwest Gas file a report by  
26 June 30, 2017, as discussed herein.

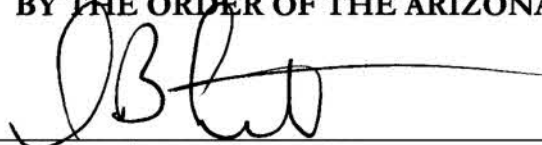
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ORDER

IT IS THEREFORE ORDERED that the modifications requested to Decision No. 74875 proposed by Southwest Gas Corporation in its October 24, 2016 filing are approved.

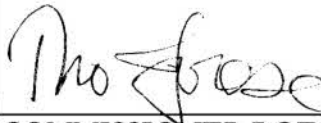
IT IS FURTHER ORDERED that this Decision shall become effective immediately.

**BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**



CHAIRMAN LITTLE



COMMISSIONER STUMP

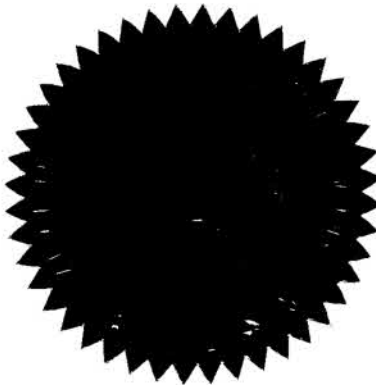


COMMISSIONER ROESE



COMMISSIONER TOBIN

COMMISSIONER BURNS



IN WITNESS WHEREOF, I, JODI A. JERICH, Executive Director of the Arizona Corporation Commission, have hereunto, set my hand and caused the official seal of this Commission to be affixed at the Capitol, in the City of Phoenix, this 3rd day of January, 2016.7



JODI A. JERICH  
EXECUTIVE DIRECTOR

DISSENT: \_\_\_\_\_

DISSENT: \_\_\_\_\_

JHM:RRG:red/CHH

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